

# PATENT SPECIFICATION

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291,754

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Complete Accepted: Sept. 6, 1928.

## COMPLETE SPECIFICATION.

### Improvements in Automobile Head Lamps.

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I, JOSEPH BOREL, French citizen, of 6, rue Royale, Annecy, Haute Savoie, France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to non dazzle head lamps for automobiles which project no rays above the horizontal plane which passes through their luminous point; it has for object to increase the range and luminous intensity of the head lamp in a determined direction without modifying the distribution of the other rays laterally and towards the ground.

It is applicable to a large number of head lamps in actual use but more particularly to the constructions which have been the object of the British Patents Nos. 257,190 and 280,753 in the same name.

The invention resides essentially in the addition of a half-lens to the head lamp, combined and arranged in such a manner that it intercepts and projects afar a certain beam so as to illuminate a determined point with a greater intensity than the other points which are illuminated.

The accompanying drawing shows by way of example, three different forms of construction of the new combination in which;

Fig. 1 is a diagrammatic section of a head lamp such as formed the subject of one of the above mentioned patents and provided with the new arrangements,

Fig. 2 is a plan view of Fig. 1,

Fig. 3 shows a head lamp in which the reflector surrounds the lamp over a large part of its contour,

Fig. 4 indicates the application of the new improvement to Patent 280,753 in combination with a small parabolic reflector, of the same diameter as the half-lens, further increasing the luminous intensity towards the desired point.

In these drawings, immaterial what the form of the main reflector may be which distributes equally the rays over a large zone.

1, is the said reflector.

2, the luminous point.

3, the lower half of a lens disposed for

[Price 1/-]

wardly intercepting part of the direct rays emanating from the luminous point and concentrating them, for example, in the axis of the vehicle which carries the head lamp, a long way ahead.

4, Fig. 4 is a small parabolic reflector of the same diameter as the half-lens and situated in the same axis behind the lamp, and projecting in this way a certain number of rays on to the half-lens, thus further intensifying the luminous power.

Thanks to this arrangement the penetrating power of the head lamp is increased and a point chosen in the largely illuminated zone of the device, is illuminated with an increased intensity much greater than the others without however in any way causing dazzle.

There has been shown the half of a spherical lens but all forms of simple or composite lenses can be used to obtain the desired result. Also the distance of the luminous point from the lens is variable and said lens, complete as in Figs. 3 and 4, or reduced to half as in Fig. 1, can be mounted in any appropriate manner to permit of adjustment and cleaning.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

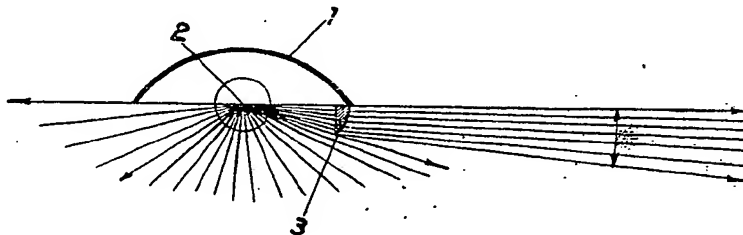
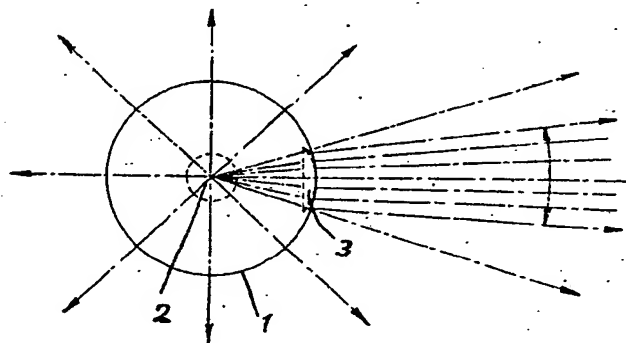
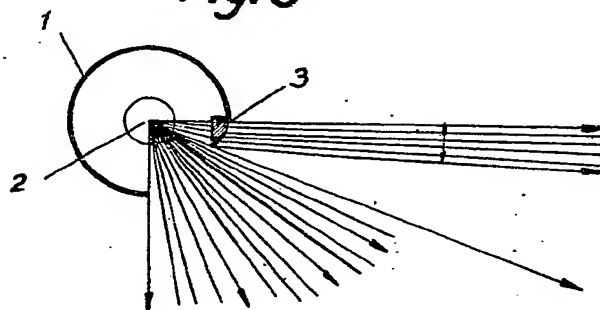
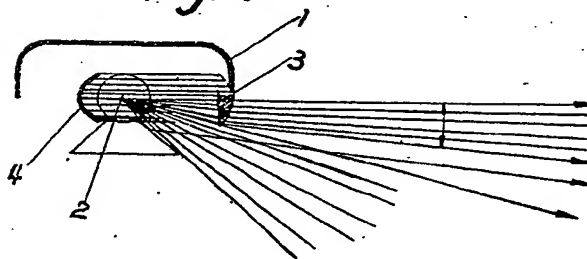
1. Improvements in non-dazzle head lamps for automobiles, illuminating a large zone without projecting any rays above a horizontal plane passing through their luminous points, such improvements essentially consisting of the combination with such head lamps of the lower half of a lens intercepting part only of the rays projected in all directions so as to concentrate them on a point to be illuminated with greater intensity than the other points of the illuminated zone.

2. In a head lamp as claimed in Claim 1 the provision of a small parabolic reflector placed behind the lamp and of the same diameter and same axis as the half-lens and concentrating part of the rays onto this lens.

Dated this 1st day of February, 1928.

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*Fig. 1**Fig. 2**Fig. 3**Fig. 4*

Charles &amp; Read Ltd. Photo Litho.

[This Drawing is a reproduction of the Original on a reduced scale.]